IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:
  Martin Randler
 	
For: METHOD FOR DRIVER ASSISTANCE
   AND DRIVER ASSISTANCE DEVICE
   ON THE BASIS OF LANE
   INFORMATION
 	
Filed: August 4, 2008
 	
Serial No.: 10/574,647
	Examiner: Chikaodili E. Anyikire
	
	Art Unit: 2482
	
	Confirmation No. 5483

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

SIR:

On August 31, 2011, Appellants e-filed a Notice of Appeal as to the Final Office Action dated June 3, 2011 in the above-identified patent application, so that the two-month appeal brief due date is October 31, 2011.

In the Final Office Action, claims 12 to 27 were finally rejected.

It is understood for purposes of the appeal that any Amendments to date have already been entered by the Examiner.

The Appeal Brief is believed to comply with all the requirements of Rule 41.37. It is noted that the "concise explanation" language of the Rule is like the "concise explanation" requirement of former Rule 37 CFR 1.192, and that the length of the concise explanation provided herein should therefore be acceptable, since the format was acceptable under 37 CFR 1.192 and since it specifically defines the subject matter of the relevant claims involved in the appeal. AARON C. DEDITCH (reg. no. 33,865) has filed many appeal briefs, the concise explanation for which has ultimately always been accepted by the Patent Office.

The Office is encouraged to contact the undersigned if there are any questions as to the description of the claimed subject matter.

It is noted that the Patent Office Rules do not require the Applicants to include references cited by and relied upon by the Examiner in the Evidence Appendix (although it is required by the Office for the Examiner). In the present Appeal, the Applicants have not submitted any evidence on which they intend to rely, so that the Evidence Appendix lists no evidence.

It is respectfully submitted that this Appeal brief complies with 37 C.F.R. 41.37. It is respectfully submitted that the final rejections of pending and considered *claims 12 to 27* should be reversed for the reasons explained below.

1.   REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH ("Bosch"), Postfach 30 02 20, 70442 Stuttgart, Federal Republic of Germany. Bosch is the assignee of the entire right, title, and interest in the present application.

2.   RELATED APPEALS AND INTERFERENCES

There are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellants or the assignee, Bosch, "which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal."

3.   STATUS OF CLAIMS

CLAIMS 1 TO 11 ARE CANCELED.

Claims 12 to 27 stand rejected under 35 U.S.C. 102(b) as anticipated by U.S. Pat. App. Pub. No. 2003/0060936 ("Yamamura").

Appellants appeal from the final rejections of claims 12 to 27. A copy of the appealed claims 12 to 27 is attached hereto in the Claims Appendix.

4.   STATUS OF AMENDMENTS

A Final Office Action issued June 3, 2011. No response was filed as to the Final Office Action.

It is understood for purposes of the appeal that any other Amendments to date have already been entered by the Examiner.

5.   SUMMARY OF THE CLAIMED SUBJECT MATTER

The presently claimed subject matter of independent claim 12 relates to a method for providing driving assistance to a driver of a vehicle. (See, e.g., Abstract). The method includes *obtaining composite lane information regarding a road lane in which the vehicle is traveling, wherein the composite lane information is derived from at least two characterizing information items regarding the road lane. (See e.g., Specification, page 2, line 19 to page 3, line 2). The method further provides triggering at least one of an output of driver-assistance information and a vehicle-control action based on the composite lane*

information. (*See* e.g., Specification, page 2, line 7 to page 3, line 2, and page 4, line 20 to page 5, line 21). The method further provides *the composite lane information is derived at least partially based on at least one of the following: a preceding vehicle or an oncoming vehicle, tracks of a preceding vehicle, a lane boundary, a barrier or a guardrail, and a curb or other road edge structure.* (*See* e.g., Specification, page 2, line 19 to page 3, line 2, page 7, lines 7 to 21).

The presently claimed subject matter of independent claim 21 relates to a driver assistance system for a driver of a vehicle. (*See* e.g., Abstract). The system includes *an image sensor unit for obtaining an image of a road lane in which the vehicle is traveling.* (*See* e.g., Figure 1, and Specification, page 4, line 20 to page 5, line 21). The system further includes *an analyzer unit for obtaining a composite lane information regarding the road lane in which the vehicle is traveling, wherein the composite lane information is derived from at least two characterizing information items regarding the road lane.* (*See* e.g., Specification, page 2, line 19 to page 3, line 2). The system further includes *a control unit for triggering at least one of an output of driver-assistance information and a vehicle-control action based on the composite lane information.* (*See* e.g., Specification, page 2, line 7 to page 3, line 2, and page 4, line 20 to page 5, line 21). The system further includes *the composite lane information is derived at least partially based on at least one of the following: a preceding vehicle or an oncoming vehicle, tracks of a preceding vehicle, a lane boundary, a barrier or a guardrail, and a curb or other road edge structure.* (*See* e.g., Specification, page 2, line 19 to page 3, line 2, page 7, lines 7 to 21).

The presently claimed subject matter of independent claim 24 relates to a method for providing driver assistance based on lane information. (*See* e.g., Abstract). The method includes *determining the lane information using image information from a camera, wherein the lane information includes first track data and additional track data.* (*See* e.g., Figure 1, and Specification, page 4, line 20 to page 5, line 21, and page 2, line 19 to page 3, line 2). The method further includes *triggering one of driver information and a steering intervention based on the lane information,* in which *the first track data are determined based on image information concerning lane edge markings,* in which *the additional track data are determined based on other information based on the image information from the camera, the other information being alternative to the lane edge markings, from which a course of the roadway is derived, and* in which *the first track data and the additional track data are brought together to form the track data used for providing driver assistance.* (*See*

e.g., Specification, page 2, line 7 to page 3, line 2, and page 4, line 20 to page 5, line 21, and page 7, lines 7 to 21).

The presently claimed subject matter of independent claim 26 relates to a device for providing driver assistance based on lane information. (*See* e.g., Abstract). The device includes *a determining arrangement to determine the lane information using image information from a camera,* in which *the lane information includes first track data and additional track data.* (*See* e.g., Figure 1, and Specification, page 4, line 20 to page 5, line 21, and page 2, line 19 to page 3, line 2). The device further includes *a triggering arrangement to trigger one of driver information and a steering intervention based on the lane information,* in which *the first track data are determined based on image information concerning lane edge markings,* in which *the additional track data are determined based on other information based on the image information from the camera, the other information being alternative to the lane edge markings, from which a course of the roadway is derived,* and in which *the first track data and the additional track data are brought together to form the track data used for providing driver assistance.* (*See* e.g., Specification, page 2, line 7 to page 3, line 2, and page 4, line 20 to page 5, line 21, and page 7, lines 7 to 21).

Finally, the appealed claims include no means-plus-function language and no step-plus-function claims, so that 41.37(v) is satisfied as to its specific requirements for such claims, since none are present here. *Also, the present application does not contain any step-plus-function claims because the method claims in the present application are not "step plus function" claims because they do not recite "a step for," as required by the Federal Circuit and as stated in Section 2181 of the MPEP.*

6.   GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

A. Whether claims 12 to 27, which stand rejected under 35 U.S.C. 102(b), are anticipated by Yamamura.

7.   **ARGUMENTS**

    A.   **Rejections of Claims 12 to 27 under 35 U.S.C. § 103(a)**

        Claims 12 to 27 stand rejected under 35 U.S.C. 102(b) as anticipated by U.S. Pat. App. Pub. No. 2003/0060936 ("Yamamura"). The rejection should be reversed for at least the following reasons.

        As regards the anticipation rejections of the claims, to reject a claim under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (See *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). As explained herein, it is respectfully submitted that the Final Office Action does not meet this standard, for example, as to all of the features of the claims. Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed subject matter. (See *Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)).

        As further regards the anticipation rejections, to the extent that the Final Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Office must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flows from the teachings of the applied art." (See *M.P.E.P. § 2112*; emphasis in original; and see Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int'f. 1990)). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic.

    1. **Claims 12 to 20**

        Claim 12 includes the features of *obtaining composite lane information regarding a road lane in which the vehicle is traveling,* in which **the composite lane information is derived from at least two characterizing information items regarding the road lane**, and in which **the composite lane information is** _derived_ **at least partially based on at least one of the following: a preceding vehicle or an oncoming vehicle, tracks of a**

preceding vehicle, a lane boundary, a barrier or a guardrail, and a curb or other road edge structure.

The Final Office Action (at page 3) conclusorily asserts that Yamamura (pars. 0089 and 0090) somehow discloses these features. In fact, however, the cited portions of Yamamura merely concern a driving assist system 40 that includes a data acquisition system 42 for acquiring information on environment around the vehicle. Even if Yamamura may state that the information on environment may include lane markings (in terms of lateral displacement of the present subject vehicle 14), it does not identically disclose (or suggest) that the lane marking is *derived from at least two characterizing information items regarding the road lane* or *the composite lane information is derived at least partially based on at least one of the following: a preceding vehicle or an oncoming vehicle, tracks of a preceding vehicle, a lane boundary, a barrier or a guardrail, and a curb or other road edge structure*, as provided for in the context of claim 12.

Therefore, it is respectfully submitted that the anticipation rejections of claim 12 and its dependent claims 13 to 20 should be reversed.

2. Claims 21 to 23

Independent claim 21 includes features like those of claim 12, so that claim 21 and its dependent claim 22 and 23 are allowable for essentially the same reasons as claim 21.

Reversal of this anticipation rejections as to claims 21 to 23 is therefore respectfully requested.

3. Claims 24 and 25

Independent claim 24 provides that *the **first track data are determined based on image information concerning lane edge markings**, in which **the additional track data are determined based on other information based on the image information from the camera**, **the other information being alternative to the lane edge markings, from which a course of the roadway is derived**, and in which the first track data and the additional track data are brought together to form the track data used for providing driver assistance.*

The Final office Action cites the same portions of Yamamura (pars. 0089 and 0090) as assertedly disclosing these features. In fact, however, it is believed and respectfully submitted that any reading of Yamamura makes plain that it does not disclose the features of the ***first track data*** and the ***additional track data*** as provided for in the context of claim 24.

Therefore, Yamamura does not identically disclose all of the features as provided for in the context of claim 24 and its dependent claim 25, so that these claims are allowable.

Reversal of this anticipation rejections as to claims 24 and 25 is therefore respectfully requested.

4. Claims 26 and 27

Independent claim 26 includes features like those of claim 24, so that claim 26 and its dependent claim 27 are allowable for essentially the same reasons explained above as to claim 24.

Reversal of the anticipation rejections as to claims 26 and 27 is therefore respectfully requested.

It is therefore respectfully requested that all rejections of the pending and rejected claims be withdrawn.

CONCLUSION

For at least the reasons indicated above, Appellants respectfully submit that the art of record does not disclose or suggest the subject matter as recited in the claims of the above-identified application. Accordingly, it is respectfully submitted that the subject matter recited in the claims of the present application is new, non-obvious, and useful.

Respectfully submitted,

KENYON & KENYON LLP

Dated: <u>October 31, 2011</u>

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CUSTOMER NO. 26646

CLAIMS APPENDIX

1-11. (Canceled).

12. A method for providing driving assistance to a driver of a vehicle, comprising:

obtaining composite lane information regarding a road lane in which the vehicle is traveling, wherein the composite lane information is derived from at least two characterizing information items regarding the road lane; and

triggering at least one of an output of driver-assistance information and a vehicle-control action based on the composite lane information;

wherein the composite lane information is derived at least partially based on at least one of the following: a preceding vehicle or an oncoming vehicle, tracks of a preceding vehicle, a lane boundary, a barrier or a guardrail, and a curb or other road edge structure.

13. The method as recited in claim 12, wherein the composite lane information is derived at least partially based on lane boundary markings detected from an image of the road lane obtained using a camera.

14. The method as recited in claim 13, wherein the composite lane information is derived at least partially based on objects detected from the image of the road lane.

15. The method as recited in claim 14, wherein the composite lane information is derived at least partially based on at least one of an oncoming vehicle, a preceding vehicle, and a stationary object that marks a boundary of the road lane.

16. The method as recited in claim 14, wherein the composite lane information is derived at least partially based on tracks of a preceding vehicle.

17. The method as recited in claim 14, wherein each information used to derive the composite lane information is assigned a quality index value.

Claims Appendix 1

18. The method as recited in claim 17, wherein the assigned quality index value for each information used to derive the composite lane information is considered for deriving the composite lane information.

19. The method as recited in claim 18, wherein the quality index value is derived from at least one a contrast of the image and a deviation between stored estimated lane boundary data and measured lane boundary data.

20. The method as recited in claim 18, wherein the composite lane information and the assigned quality index values are transmitted to an analyzer unit for analysis.

21. A driver assistance system for a driver of a vehicle, comprising:

an image sensor unit for obtaining an image of a road lane in which the vehicle is traveling:

an analyzer unit for obtaining a composite lane information regarding the road lane in which the vehicle is traveling, wherein the composite lane information is derived from at least two characterizing information items regarding the road lane; and

a control unit for triggering at least one of an output of driver-assistance information and a vehicle-control action based on the composite lane information;

wherein the composite lane information is derived at least partially based on at least one of the following: a preceding vehicle or an oncoming vehicle, tracks of a preceding vehicle, a lane boundary, a barrier or a guardrail, and a curb or other road edge structure.

22. The driver assistance system as recited in claim 21, wherein the analyzer unit ascertains a quality index value for each characterizing information regarding the road lane used to derive the composite lane information.

23. The driver assistance system as recited in claim 21, wherein the composite lane information is derived at least partially based on tracks of a preceding vehicle.

Claims Appendix 2

24. A method for providing driver assistance based on lane information, the method comprising:

determining the lane information using image information from a camera, wherein the lane information includes first track data and additional track data,;

triggering one of driver information and a steering intervention based on the lane information, wherein the first track data are determined based on image information concerning lane edge markings, wherein the additional track data are determined based on other information based on the image information from the camera, the other information being alternative to the lane edge markings, from which a course of the roadway is derived, and wherein the first track data and the additional track data are brought together to form the track data used for providing driver assistance.

25. The method of claim 24, wherein the other information includes at least one of the following: a preceding vehicle or oncoming vehicle, tracks of a preceding vehicle, a lane boundary, a barrier or a guardrail, and a curb or other roadway edge structure.

26. A device for providing driver assistance based on lane information, comprising:

a determining arrangement to determine the lane information using image information from a camera, wherein the lane information includes first track data and additional track data;

a triggering arrangement to trigger one of driver information and a steering intervention based on the lane information, wherein the first track data are determined based on image information concerning lane edge markings, wherein the additional track data are determined based on other information based on the image information from the camera, the other information being alternative to the lane edge markings, from which a course of the roadway is derived, and wherein the first track data and the additional track data are brought together to form the track data used for providing driver assistance.

27. The device of claim 26, wherein the other information includes at least one of the following: a preceding vehicle or oncoming vehicle, tracks of a preceding vehicle, a lane boundary, a barrier or a guardrail, and a curb or other roadway edge structure.

<u>EVIDENCE APPENDIX</u>

No evidence has been submitted pursuant to 37 C.F.R. §§1.130, 1.131, or 1.132. No other evidence has been entered by the Examiner or relied upon by Appellants in the appeal.

RELATED PROCEEDINGS APPENDIX

As indicated above in Section 2 of this Appeal Brief, "[t]here are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellants or the assignee, Bosch, 'which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.'" As such, there are no "decisions rendered by a court or the Board in any proceeding identified pursuant to [37 C.F.R. § 41.37(c)(1)(ii)]" to be submitted.